

Informática Teórica

(IF689)

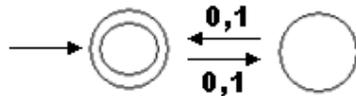
2º Semestre de 2009

1ª Mini-Prova

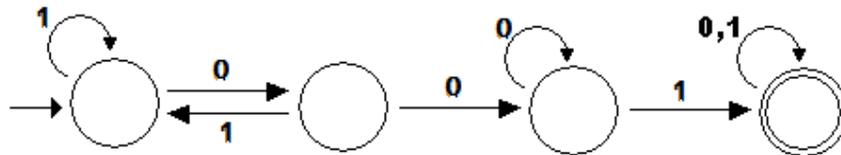
18 de Agosto de 2009

1. (0.5) Determine os AFDs que reconhecem as linguagens, Considere $\Sigma = \{0, 1\}$:

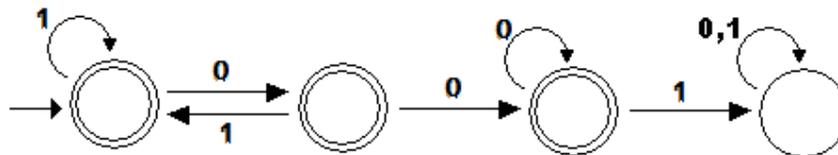
a. $L1 = \{w \mid w \text{ tem tamanho par}\}$;



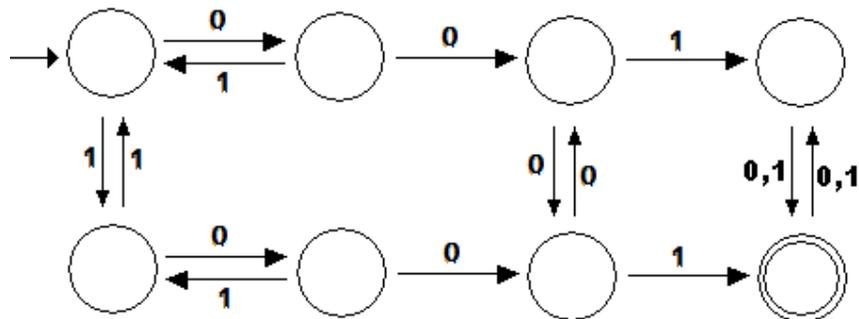
b. $L2 = \{w \mid w \text{ tem } 001 \text{ como subcadeia}\}$;



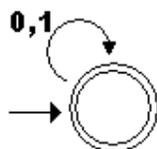
c. $L3 = \overline{L2}$;



d. $L4 = L1 \cap L2$;



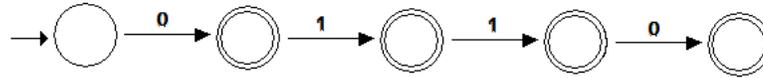
e. $L5 = L2 \cup L3$.



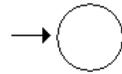
2. (0.5) Determine os AFNs que reconhecem as linguagens Considere $\Sigma = \{0, 1\}$:

a. Construa estes AFNs com o menor número de estados e transições.

i. $L1 = \{0, 01, 011, 0110\}$;

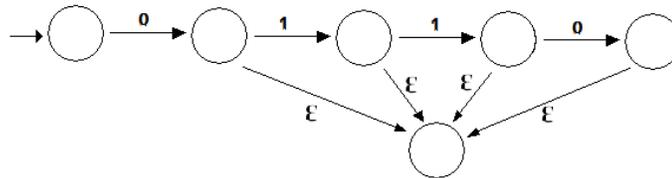


ii. $L2 = \{w \mid w \text{ tem mais de um } 0 \text{ e menos de dois } 0\text{'s}\}$;

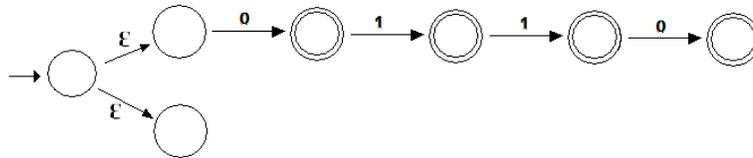


b. Construa estes AFNs usando os algoritmos.

i. $L3 = L1 \circ L2$



ii. $L4 = L1 \cup L2$



iii. $L5 = L2^*$

